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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,188	06/09/2006	Mun Yhung Jung	NAMNP0104US	1206

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EXAMINER	
KRAUSE, ANDREW E	

ART UNIT	PAPER NUMBER
4152	

MAIL DATE	DELIVERY MODE
11/13/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/540,188	JUNG ET AL.	
	Examiner	Art Unit	
	ANDREW KRAUSE	4152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The listing of references in the Search Report is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited pending U.S. application is stored in the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. In addition, each IDS must include a list of all patents, publications, applications, or other information submitted for consideration by the Office (see 37 CFR 1.98(a)(1) and (b)), and MPEP § 609.04(a), subsection I. states, "the list ... must be submitted on a separate paper." Therefore, the references cited in the Search Report have not been considered. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-12** are rejected under 35 U.S.C. 102(b) as being anticipated by Willard (US 4,698,230).

3. **Regarding claim 1**, Willard discloses a process wherein an acid substance (citric or malic (Col. 3 lines 50-55) is added to potato products (column 4, lines 3-21). Potatoes are considered to contain asparagine, since it is an amino acid that is contained in a variety of vegetarian sources, such as asparagus, potatoes and legumes. Subjecting the potatoes with the treatment of acid will cause protonation of the nucleophilic α-amino group, converting it to a non-nucleophilic amine. Although Willard is silent as to the

effect of this process on acrylamide formation, it is not considered inventive to discover a new result from a known process.

4. **Regarding claims 2-3**, the protonation step is carried out using a pH lowering agent, like citric or malic acid (column 3, lines 50-55) for the treatment of food ingredients (column 3 line 50-column 4 line 21).

5. **Regarding claims 4-6**, Willard discloses adding citric acid to potatoes prior to a heat treatment of frying (example 5).

6. **Regarding claim 7**, Willard discloses that the food is potatoes, which inherently contain amino acids.

7. **Regarding claim 8**, Willard discloses using potatoes, which are well known in the art to be carbohydrate foods.

8. **Regarding claim 9**, Willard discloses subjecting the potatoes to acids in similar concentrations as those claimed. (Col. 8 lines 5-25) Although Willard does not explicitly disclose the pH reduction of the potatoes, it is considered to be inherent that, having been subjected to the same process as claimed, that the potatoes of Willard will undergo a similar reduction in pH.

9. **Regarding claim 10**, Willard discloses adding the pH lowering agent in concentrations between 0.05-0.30% of the weight of the potato product (column 9, lines 60-65).

10. **Regarding claim 11**, Willard discloses using the organic acids, citric acid or malic acid (column 9, lines 36-68).

11. **Regarding claim 12**, Willard discloses using citric or malic acid (column 9, lines 36-68).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were

made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willard in view of Lozano (ES 2019044 Derwent Abstract)

16. **Regarding claim 13**, Willard discloses the method of claim 11, but fails to disclose using an inorganic acid.

17. However, Lozano discloses treating potato slices with an inorganic acid, such as phosphoric acid (Derwent abstract).

18. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of Willard with the use of phosphoric acid as disclosed by Lozano for the frying of potatoes, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of the suitability for the intended use as a matter of obvious engineering choice. In re Leshin, 125 USPQ 416. The disclosure of Lozano specifically discloses the use of phosphoric acid with the treating of potatoes, therefore such a material and method of treating is known in the art.

19. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willard in view of Slaybaugh (US #3,512,990).

20. **Regarding claim 14**, Willard discloses the method of claim 11, but fails to disclose using the salt of an inorganic acid.

21. However, Slaybaugh discloses that monosodium phosphate is an additive conventionally used in carbohydrate foods (column 1, line 55-65) to enhance the flavor of the food or to preserve the food.

22. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of Willard with the use of salts of inorganic acids (such as monosodium phosphate) as disclosed by Slaybaugh. The use of monosodium phosphate as disclosed by Slaybaugh for the frying of potatoes is considered to be within the general skill of a worker in the art to select a known material on the basis of the suitability for the intended use as a matter of obvious engineering choice. In re Leshin, 125 USPQ 416. The disclosure of Slaybaugh specifically discloses the use of monosodium phosphate with the treating and frying of potatoes (Col. 1 lines 50-60), therefore such a material and method of treating is known in the art of potato production.

23. Claim 15 rejected under 35 U.S.C. 103(a) as being unpatentable over Willard in view of Cole (US #3,219,464).

24. **Regarding claim 15**, Willard discloses the method of claim 11, but fails to disclose using a buffer solution.

25. However, Cole discloses a method for processing potatoes wherein the potatoes are treated with a potassium phosphate buffer solution (Col. 2 lines 22-35 and Example 4).

26. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of Willard with the use of a Potassium Phosphate buffer as disclosed by Cole. Cole discloses that it is well known in the art of producing edible potatoes to add a buffer of potassium phosphate to maintain pH control through out the cooking of most potatoes. (Col. 2 lines 22-35)

27. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willard.

28. **Regarding claim 16**, Willard discloses the method of claim 11, but does not explicitly disclose using a fruit juice. However, Willard does disclose using citric acid, which is well known to be a component of juices such as lemon, orange, citron, and lime. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of Willard with the use of lemon, orange, citron, or lime juice as a source of citric acid, since all elements were known at the time of the invention and could have been combined to yield predictable results to one of ordinary skill in the art at the time of the invention. Additionally, the use of the variety

of fruit juices in claim 16 is considered to be for flavor enhancement of the potatoes, this aspect is also considered to be obvious in light of the Willard reference because the use of citric acid is considered to help enhance the flavor of the potatoes in Willard. (Col. 3 lines 50-55)

Conclusion

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

30. US 20050064084 A1
31. US 20060147606 A1
32. US 20040086597 A1
33. US 20070141225 A1
34. US 7267834 B2
35. US 5126153 A
36. US 5389389 A
37. US 5391384 A
38. US 20040131737 A1
39. US 20040105929 A1
40. US 5912034 A
41. US 6235333 B1
42. US 20020155207 A1

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW KRAUSE whose telephone number is (571)270-7094. The examiner can normally be reached on 7:30-5, off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Del Sole can be reached on (571)272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ANDREW KRAUSE/
Examiner, Art Unit 4152

/Joseph S. Del Sole/
Supervisory Patent Examiner, Art Unit 4152